

## CHAPTER 2

### GEOGRAPHIC SETTING

The four Naaman's Road study areas lie within the Piedmont Plateau physiographic province, which is confined to the northern portion of New Castle County. The Piedmont Plateau possesses a hilly topography, and generally ranges in elevation from 100 to 400 feet above sea level. Soils are generally well drained and overlie diabase and other igneous and metamorphic rocks (Matthews and Lavoie 1979).

Naaman's Road in the project vicinity is oriented roughly east-west along a ridge between the West and South Branches of Naaman's Creek. The ridge decreases in elevation to the east approaching the Delaware River. The four study areas lie on and near a bluff above the South Branch and a smaller tributary stream. The junction of Marsh and Naaman's Road lies at an elevation of 310 feet above sea level.

The area lies near the junction of two soil associations: Neshaminy-Aldino-Watchung and Neshaminy-Talleyville-Urban land. The dominant soil series is Talleyville, specifically a Talleyville silt loam (TaB2) with two and five percent slopes, and characterized as moderately eroded, medium texture and well drained. The Talleyville series is unusual in the county, being encountered only in the northern portion. A typical profile displays an A horizon of eight inches of dark brown silt loam plow zone and two inches of dark yellow brown silt loam. The subsoil (B horizon) may be divided into three zones within a total thickness of 54 inches: an upper strong brown silt loam; a middle red silty clay loam; and a lower red clay. The soil most likely supported a native vegetation of mixed hardwoods which have mostly disappeared and indeed would mostly have been cleared away in the 19th century. This Talleyville soil is excellent for agriculture, which of course is of particular significance from the standpoint of cultural geography.

A minor soil type occurring in the project vicinity is the Watchung and Calvert silt loam (WcA), which surrounds the small tributary stream to the east of the junction of Marsh and Naaman's Roads, and the tributary on the Naaman's Road (West) study area. The Watchung soil is also an upland type, but unlike the Talleyville soil is poorly drained. A typical profile consists of eight inches of dark gray silt loam (A horizon) and a B horizon 22 inches in thickness, composed of gray silt clay loam in the upper portion and gray silty clay in the lower portion (Matthews and Lavoie 1979).